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FIFTH ANNUAL REPORT

OF

The Harcourt Butler Institute of Public Health Rangoon

FOR THE YEAR 1930

Rangoon
Supdt., Govt. Printing and Stationery, Burma
1931

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RESOLUTION

ON THE

Report on the Working of the Harcourt Butler Institute of Public Health, Rangoon

For the Year 1930.

Extract from the Proceedings of the Government of Burma, Public Health Department,—No. 129S31, dated the 17th June 1931.

READ—

The Report on the Working of the Harcourt Butler Institute of Public Health, Rangoon, for the year 1930.

RESOLVED THAT—

The Report be published.

H. G. WILKIE,

Secretary to the Government of Burma,
Education Department.

PUBLIC HEALTH DEPARTMENT.—No. 8234—11S.-5-31.

FROM

LIEUT.-COL. G. JOLLY, C.I.E., I.M.S.,
Offg. Director of Public Health, Burma,

TO

THE SECRETARY TO THE GOVERNMENT OF BURMA,
EDUCATION DEPARTMENT.

Dated Rangoon, the 21st May 1931.

SUBJECT.—*Fifth Annual Report of the Harcourt Butler Institute of Public Health.*

SIR,

I have the honour to forward herewith the Fifth Annual Report of the Harcourt Butler Institute of Public Health, which is for the calendar year 1930.

2. The continued lack of a full-time Director has brought us to a stage at which we have had to call a halt to all further development of work, and unless a full-time Director is appointed at an early date, we shall be obliged to consider closing down some, at least, of the activities of the Institute.

3. In view of the possibility of separation of this Province from India, the question of manufacturing our own vaccines, particularly cholera and plague, has been under consideration. It is impossible for us to undertake such manufacture in the absence of a full-time competent Bacteriologist. If, as is proposed, the Bacteriologist to the Institute be also its Director, it appears that in an average year the cost of employment of such an officer should be recouped by savings effected in the purchase of vaccines.

4. Mr. E. H. Bunce, Public Analyst, who is in charge of the Chemical Section of the Institute, has had a busy year working on food standards. Such standards have now been prepared for milk and edible oils, and other standards for condensed and dried milks are under consideration. This section is in great need of a second Assistant Chemist.

5. The Rangoon Rat Flea Survey, initiated in 1928, is nearing completion, and the results of the Port Area have been sent for publication in the Indian Journal of Medical Research. Summaries of the results obtained in the other parts of the town have been sent to the Secretary, Scientific Advisory Board, Indian Research Fund Association.

6. Last year the Corporation of Rangoon accepted my proposals to carry out a mosquito survey of the town in collaboration with their health staff. This was begun on the 1st of April 1930 and was completed on the 30th November. The laboratory side of the work was carried out in the Institute under Dr. Feegrade, and the report is under compilation.

7. My thanks are due to the staff of the Institute, who have managed to carry on successfully under great pressure of work.

I have the honour to be,

SIR,

Your most obedient servant,

G. JOLLY, *Lieut.-Col., I.M.S.*,
Director of Public Health, Burma.

FIFTH ANNUAL REPORT

OF

The Harcourt Butler Institute of Public Health, Rangoon,

For the Year 1930.

Staff of the Institute—Director.—Dr. J. A. Anklesaria held charge of the Institute from 1st January to 1st July 1930, when Major E. Cotter, I.M.S., took over and held charge from the 2nd July 1930 to the end of the year.

Assistant Director.—Dr. G. Mackey, D.T.M., I.M.D., from 1st January to 31st December 1930.

Chemist.—U Thein Kin, B.A., F.C.S., A.T.M., from 1st January to 16th April 1930 and Mr. E. H. Bunce, F.I.C., from 17th April to the end of the year.

Assistant Chemist.— Mr. G. C. Moitra, B.Sc., F.C.S., from 1st January to the end of the year.

Malariologist.—Dr. E. S. Feegrade, D.T.M., I.M.D., from 1st January to 31st December 1930.

Assistant Bacteriologist.—U Pa How, from 1st January to 31st December 1930.

General.—Four courses of instruction were conducted in the Institute during the year :—

1. The Rangoon University M.B. course in Hygiene.
2. The Government of Burma Qualifying course for Public Health Inspectors.
3. A special course in Hygiene for Post Graduate Sub-Assistant Surgeons.
4. The Government of Burma License in Hygiene course for Sub-Assistant Surgeons of the Public Health Department.

Laboratory Work.—

A. Bacteriological Section.—The following work was done in the laboratories of this section during the year :—

1. Water examination	...	...	...	219
2. Shaving brushes	...	...	...	16
3. Widal's tests	...	...	...	13

4. Urine examination	2
5. Sputum examination, T.B.	14
6. Smears	7
7. Disinfectants	11
8. Plague rats	2
9. Yaws	1
10. Faeces	1
	286

B. Chemical Section.—The tables below give the work done in this section during the year :—

Description of samples. (1)	Number examined. (2)	Number adulterated or otherwise unsatisfactory. (3)
Atta	20	2
Beer	1	...
Cinchona febrifuge tablets	13	2
Disinfectants	24	...
Edible fat	1	1
Enamel	8	...
Garlic	1	1
Ghee	136	6
Ground-nut oil	37	3
Honey	1	...
Milk	52	9
Milk, Condensed (full cream sweetened)	1	...
Milk, Condensed (skimmed sweetened)	6	...
Milk, human	9	...
Milk (for experimental investigation)	392	...
Milk foods	2	...
Mineral salts	15	...
Phenacetin	1	...
Rice	115	28
Rice bran	2	...
Rice polishings	1	...
Soap	6	3
Sesame oil	23	3
Volcanic rock	1	...
Water deposits	2	...
Total ...	870	58

In addition 340 water and 9 effluent samples were examined.

Total examinations = 1,219.

These examinations were carried out for the following bodies or individuals :—

Director of Public Health.
Police Department.
Military Department.
District Health Officers.
Civil Surgeons.
Hospitals.
Jails.
Public Works Department.

Investigations.—A rat flea survey of the Central Area and of the Poozundaung Area of Rangoon, which was started in 1929, was completed on the 31st January 1930.

On the 15th February 1930, a rat flea survey of the whole Municipal Area of Rangoon, excluding the Port area, was commenced and continued to the end of the year.

During the year a rat flea survey of Hlegu Town was also carried out.

A preliminary investigation into rat and rat flea conditions on barges and lighters, from which sea-going vessels are loaded, was conducted from October to December 1930, preparatory to a wider investigation in 1931.

2. The results of the use of anti-dysenteric vaccine in 1929, as a protection against dysentery, being regarded as promising, it was decided by the Director of Public Health to give the vaccine a further trial on a more extensive scale in 1930. Fourteen jails in the Province were issued with this vaccine. Sixteen thousand seven hundred and seven doses were issued from the Institute during the year. The reports from the jails on its effect on the incidence of dysentery in 1930 are again regarded as justifying a further issue in 1931.

3. The sanitary significance of the presence of B. pyocyaneus in water was studied during the year and a report has been published in the Indian Medical Gazette.

4. The possibility of organisms in a pit latrine being conveyed by subsoil water to water supplies in the immediate neighbourhood was investigated. A well about one foot in diameter and approximately 20 feet deep was dug and four similar wells were dug at the four corners of a square, each being 20 feet distant from the first or central well. The central well was impregnated with a strong solution of uranin, and within 24 hours the water in one of the surrounding wells showed the presence of uranin. The next experiment was carried out later with B. prodigiosus as the experimental organism. The water from all five wells was further examined for three consecutive days for the presence of B. prodigiosus and the absence of this organism was established. The central well was then infected with a heavy emulsion of B. prodigiosus and this organism was isolated in 3 of the surrounding wells within 24 hours.

5. The effect of cement grouting a tube well, as a protection against surface pollution, was studied by a series of water examinations, and in the case of the well examined grouting was proved to be of little value as the pollution appeared to be entering from elsewhere.

Malaria Bureau.—Sub-Assistant Surgeon U Lwin was attached to the Malaria Bureau in place of Sub-Assistant Surgeon U Tin, on deputation at the School of Tropical Medicine and Hygiene, Calcutta, from 1st January 1930 to 23rd April 1930.

Sub-Assistant Surgeon U Tin obtained the Diploma in Tropical Medicine, Bengal, and on his return on 23rd April 1930, rejoined the Malaria Bureau.

The following mosquito and spleen surveys were undertaken and completed during the year :—

1. Mosquito Survey of Rangoon City under the Director of Public Health and in collaboration with the Corporation of Rangoon (Dr. E. S. Feegrade, Sub-Assistant Surgeon U Lwin and Sub-Assistant Surgeon U Ba Hman).
2. Spleen Surveys of Pegu, Mandalay, and Katha (Sub-Assistant Surgeon U Tin).
3. Mosquito Surveys of Taunggyi and of the Government Technical Institute, Insein (Sub-Assistant Surgeon U Tin).

Methods of spraying and spreading Malariol, a proprietary preparation of the Burma Oil Company, Limited, Rangoon, were demonstrated at Shwenyaung by Sub-Assistant Surgeon U Tin.

Laboratory Experiments.—The following larvicidal proprietary preparations of various manufacturing companies were examined in the laboratory to test their efficiency in killing larvae :—

1. Malariol
2. Stadeo
3. Empranin No. 2
4. Mus-kil-em
5. Paris Green.

The following diluents of Paris Green were also experimented with to ascertain which of them were most effective and economical :—

1. Volcanic clay
2. Burnt paddy husk
3. Road dust
4. Lime.

Anopheline mosquitoes were received and identified from the following places :—

Kyaukse District
Yamethin District
Falam, Chin Hills
Taunggyi
Maymyo.

The following species of fish were collected in Rangoon and added to the list of larvivorous fishes in Burma :—

Ophiocephalus striatus, Bloch.
Ophiocephalus marulius, H.B.
Danio (brachhydanio) nigrofasciatus, Day.

Publication.—A key to the identification of the female mosquitoes of Burma was drawn up for the Director of Public Health.

Model Making.—Models of the following Insects for teaching purposes were made in the Bureau :—

The aquatic and aerial stages of Anopheles maculatus
The aquatic and aerial stages of Aedes argentius
The aquatic and aerial stages of Culex fatigans
Developmental stages of Musca domestica
Models relating to Plague, Leprosy, Small-pox, etc.

Buildings.—A room was built over the porch of the Institute during the year.

Additional laboratory benches were constructed in the Malaria Bureau.

E. COTTER, *Major, I.M.S.,*
Director, Harcourt Butler Institute of Public Health, Rangoon.

G.B.C.P.O.—No. 7, D.P.H., 20-7-1931—212.